

**TRANSLATION**

**PATENT COOPERATION TREATY**

**PCT**

**INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY**

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference <b>PCT2004-03</b>	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. <b>PCT/JP2004/016973</b>	International filing date ( <i>day/month/year</i> ) <b>16.11.2004</b>	Priority date ( <i>day/month/year</i> ) <b>18.11.2003</b>
International Patent Classification (IPC) or national classification and IPC <b>A23L1/325</b>		
Applicant <b>NIPPON SUISAN KAISHA, LTD.</b>		

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> ( <i>sent to the applicant and to the International Bureau</i> ) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> ( <i>sent to the International Bureau only</i> ) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application

Date of submission of the demand	Date of completion of this report
Name and mailing address of the IPEA/JP	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016973

## Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- nos. \_\_\_\_\_ as originally filed/furnished
- nos.\* \_\_\_\_\_ as amended (together with any statement) under Article 19
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- nos.\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- sheets \_\_\_\_\_ as originally filed/furnished
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- sheets\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016973

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-10	YES
	Claims		NO
Inventive step (IS)	Claims	6-10	YES
	Claims	1-5	NO
Industrial applicability (IA)	Claims	1-10	YES
	Claims		NO
2. Citations and explanations (Rule 70.7)			
[Citations]			
Document 1: JP 58-1904 B2 (Nippon Suisan Kabushiki Kaisha), 13 January 1983 (Family: none)			
Document 2: JP 53-52656 A (Nozaki Kamaboko Kabushiki Kaisha), 13 May 1978 (Family: none)			
Document 3: JP 53-52657 A (Nozaki Kamaboko Kabushiki Kaisha), 13 May 1978 (Family: none)			
Document 4: JP 51-110065 A (Nozaki Kamaboko Kabushiki Kaisha), 29 September 1976 (Family: none)			
Document 5: JP 7-67587 A (Kabushiki Kaisha Katayama), 14 March 1995 (Family: none)			
Document 6: JP 63-164868 A (Ajinomoto Co., Inc.), 08 July 1988 (Family: none)			
[Explanations]			
Claims 1 to 5			
The invention set forth in claims 1 to 5 does not involve an inventive step in the light of document 2 cited in the international search report, and newly cited documents 1 and 3 to 6.			

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016973

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<p>Document 1 is considered to disclose a method for producing fibrous fish meat proteins by shaping fish meat proteins into fibers via acid denaturation and then heating the denatured fish meat proteins.</p> <p>Meanwhile, techniques wherein ground fish meat or the like is added to fibrous fish meat proteins and then the resulting mixture is coagulated via molding and heating are well known (if necessary, refer to documents 2 to 4 and the like).</p> <p>In addition, documents 5 and 6 indicate that it is possible to adjust the pH level of a ground fish meat product by adding an alkali substance thereto, and also indicate that decreasing the pH level of a ground fish meat product will cause the product to lose its chewy texture. In particular, document 5 indicates that the products lose their firmness at a pH level below 6.5, whereas the products become unusable at a pH level in excess of 8.5; therein, document 5 further presents an example wherein a pH level of 8 was found to be unacceptable and the pH level of the ground meat products was adjusted to within a range of approximately 7.0 to 7.6 (example 8).</p> <p>Herein, the fibrous fish meat proteins disclosed in document 1, the coagulated fish meat products obtained by means of the abovementioned well-known technique and the inventions disclosed in documents 5 and 6 all belong to the same technical field in that they are all ground fish meat products; furthermore, in the technical field in question it is natural to attempt to produce substances that exhibit a suitable degree of chewiness or the like. Such being the case, it would have been easy for a person skilled in the art to conceive of adjusting the pH levels</p>

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016973

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
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of the fibrous fish meat proteins that are disclosed in document 1 or the coagulated fish meat products that were obtained by means of the abovementioned well-known technique to within a range of approximately 6.5 to 8.0.

In addition, a person skilled in the art could determine the timing of the adjustments to the pH levels, could establish a specific blending weight ratio for the fibrous fish meat proteins and the ground fish meat, and could impart a buffer function to the ground meat or the like so that the pH level thereof will be maintained within a constant range, as appropriate.

Furthermore, it is apparent that chewy ground meat products exhibit a chewy texture due to their superior coagulation characteristics, and thus it is obvious that said products will also exhibit superior shape retention characteristics. That is to say, it is clearly possible to obtain coagulated fish meat products that exhibit superior shape retention characteristics as a result of employing the abovementioned configuration; consequently, the invention set forth in the abovementioned claims of the present application cannot be considered to exhibit a prominent effect that would have been impossible to predict.

Claims 6 to 10

The invention set forth in claims 6 to 10 is novel and involves an inventive step in relation to document 2 cited in the international search report and newly cited documents 1 and 3 to 6.

Techniques for dehydrating ground fish meat products and the like are well known.

However, the abovementioned documents do not

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/JP2004/016973

Box No. V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;  
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indicate or suggest that dehydrated coagulated fish meat products will exhibit superior rehydration characteristics in hot water as a result of adjusting the pH levels thereof to a pH level within a range of 6.7 to 7.5.

Furthermore, the invention set forth in the abovementioned claims exhibits a prominent effect in that the resulting dehydrated coagulated fish meat products exhibit superior shape retention characteristics and superior rehydration characteristics in hot water.